Favorable consideration in the form of a notice of allowance is respectfully requested.

Respectfully submitted,

S. Matthew Cairns, Ph.D. Attorney for Applicant Registration No. 42,378

Telephone No: (508) 229-7545 Facsimile No.: (508-787-4730

c/o EDWARDS & ANGELL Dike, Bronstein, Roberts & Cushman IP Group PO Box 9169 Boston, MA 02209

Date: February 27, 2002



ATTACHMENT A1

RECEIVED
MAR 1 8 2002

TC 1700

5. (Amended) The method of claim 4 wherein the free radical initiator is selected from the group consisting of peroxyesters, dialkylperoxides, alkylhydroperoxides, persulfates, azoinitiators and redox initiators.

- 6. (Amended) The method of claim 1 wherein at least one monomer is selected from the group consisting of (meth)acrylic acid, (meth)acrylamides, alkyl (meth)acrylates, alkenyl (meth)acrylates, aromatic (meth)acrylates, vinyl aromatic monomers, nitrogen-containing compounds, thio-analogs of nitrogen containing compounds and substituted ethylene monomers.
- 7. (Amended) The method of claim 1 wherein the cross-linked polymer particles have a mean particle size of 0.75 to 100 nm.
- 8. (Amended) The method of claim 1 wherein at least one monomer is selected from the group consisting of silyl containing monomers and poly(alkylene oxide) monomers.
- 9. (Amended) The method of claim 1 wherein the one or more cross-linking agents is selected from the group consisting of trivinylbenzene, divinyltoluene, divinylpyridine, divinylnaphthalene and divinylxylene; and such as ethyleneglycol diacrylate, trimethylolpropane triacrylate, diethyleneglycol divinyl ether, trivinylcy/clohexane, allyl methacrylate, ethyleneglycol dimethacrylate, diethyleneglycol dimethacrylate, propyleneglycol dimethacrylate, propyleneglycol diacrylate, trimethylolpropane tr/methacrylate, divinyl benzene, glycidyl methacrylate, 2,2-dimethylpropane 1,3 diacrylate, 1,3-butylene glycol diacrylate, 1,3-butylene glycol dimethacrylate, 1,4-butanediol diacrylate, diethylene glycol diacrylate, diethylene glycol dimethacrylate, 1,6-hexanediol diacrylate, 1,6-hexanediol dimethacrylate, tripropylene glycol diacrylate, triethylene glycol dimethacrylate, tetraethylene glycol diacrylate, polyethylene glycol 200 diacrylate, tetraethylene glycol dimethacrylate, polyethylene glycol dimethacrylate, ethoxylated bisphenol A diacrylate, ethoxylated bisphenol A dimethacrylate, polyethylene glycol 600 dimethacrylate, poly(butanediol) diacrylate, pentaerythritol triacrylate, trimethylolpropane triethoxy triacrylate, glyceryl propoxy triacrylate, pentaerythritol tetraacrylate, pentaerythritol tetramethacrylate, dipentaerythritol monohydroxypentaacrylate, divinyl silane, trivinyl silane, dimethyl divinyl silane, divinyl methyl silane, methyl trivinyl silane, diphenyl divinyl silane,

Al

Al

divinyl phenyl silane, trivinyl phenyl silane, divinyl methyl phenyl silane, tetravinyl silane, dimethyl vinyl disiloxane, poly(methyl vinyl siloxane), poly(vinyl hydro siloxane), and poly (phenyl vinyl siloxane).

A2

- 17. (Amended) A composition comprising one or more B-staged dielectric materials and a plurality of cross-linked solution polymer particles having a mean particle size of \leq 30 nm and a particle size polydispersity in the range of 1 to 15.
- 20. (Amended) The composition of claim 17 wherein the plurality of polymer particles has a mean particle size of \leq 20 nm.
- A3
- 21. (Amended) A composition comprising one of more B-staged dielectric materials and a plurality of cross-linked solution polymer particles having a mean particle size of ≤ 10 nm, wherein the plurality of polymer particles is substantially free of polymer particles having a particle size of 30 nm or greater.
- 22. (Amended) The composition of claim 21 wherein the plurality of polymer particles have a mean particle size of ≤ 5 nm.

A4

- 25. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores has a mean diameter of ≤ 3 nm.
- 26. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores has a mean diameter of ≤ 2 nm.
- 27. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores has a mean diameter in the range of 0.75 to 3 nm.

AS

30. (Amended) The electronic device of claim 25 wherein the plurality of pores has a mean diameter in the range of 0.75 to 3 nm.



ATTACHMENT A2 VERSION SHOWING CHANGES MADE

RECEIVED MAR 1 8 2002 TC 1700

- 5. (Amended) The method of claim 4 wherein the free radical initiator is selected from the group consisting of peroxyesters, dialkylperoxides, alkylhydroperoxides, persulfates, azoinitiators or and redox initiators.
- 6. (Amended) The method of claim 1 wherein at least one monomer is selected from the group consisting of (meth)acrylic acid, (meth)acrylamides, alkyl (meth)acrylates, alkenyl (meth)acrylates, aromatic (meth)acrylates, vinyl aromatic monomers, nitrogen-containing compounds, thio-analogs of nitrogen containing compounds or and substituted ethylene monomers.
- 7. (Amended) The method of claim 1 wherein the cross-linked polymer particles have a mean particle size of 0.75 to 100 nm.
- 8. (Amended) The method of claim 1 wherein at least one monomer is selected from the group consisting of silyl containing monomers or and poly(alkylene oxide) monomers.
- 9. (Amended) The method of claim 1 wherein the one or more cross-linking agents is selected from the group consisting of trivinylbenzene, divinyltoluene, divinylpyridine, divinylnaphthalene and divinylxylene; and such as ethyleneglycol diacrylate, trimethylolpropane triacrylate, diethyleneglycol divinyl ether, trivinylcyclohexane, allyl methacrylate, ethyleneglycol dimethacrylate, diethyleneglycol dimethacrylate, propyleneglycol dimethacrylate, propyleneglycol diacrylate, trimethylolpropane trimethacrylate, divinyl benzene, glycidyl methacrylate, 2,2-dimethylpropane 1,3 diacrylate, 1,3-butylene glycol diacrylate, 1,4-butanediol diacrylate, diethylene glycol diacrylate, diethylene glycol dimethacrylate, 1,6-hexanediol diacrylate, tripropylene glycol diacrylate, triethylene glycol dimethacrylate, tetraethylene glycol diacrylate, tripropylene glycol diacrylate, tetraethylene glycol dimethacrylate, polyethylene glycol dimethacrylate, ethoxylated bisphenol A diacrylate, ethoxylated bisphenol A dimethacrylate, polyethylene glycol 600 dimethacrylate, poly(butanediol) diacrylate, pentaerythritol triacrylate, trimethylolpropane triethoxy triacrylate, glyceryl propoxy triacrylate, pentaerythritol tetraacrylate, pentaerythritol tetraacrylate, pentaerythritol tetraacrylate, divinyl silane, trivinyl silane,

dimethyl divinyl silane, divinyl methyl silane, methyl trivinyl silane, diphenyl divinyl silane, divinyl phenyl silane, trivinyl phenyl silane, divinyl methyl phenyl silane, tetravinyl silane, dimethyl vinyl disiloxane, poly(methyl vinyl siloxane), poly(vinyl hydro siloxane), or and poly (phenyl vinyl siloxane).

- 17. (Amended) A composition comprising one or more B-staged dielectric materials and a plurality of cross-linked solution polymers particles having a mean particle size of \leq 30 nm and a particle size polydispersity in the range of 1 to 15.
- 20. (Amended) The composition of claim 17 wherein <u>plurality of polymer particles have</u> has a mean particle size of \leq 20 nm.
- 21. (Amended) A composition comprising one or more B-staged dielectric materials and a plurality of cross-linked solution polymers particles having a mean particle size of ≤ 10 nm, wherein the plurality of polymer particles is substantially free of polymer particles having a particle size of 30 nm or greater.
- 22. (Amended) The composition of claim 21 wherein the <u>plurality of polymer particles</u> have a mean particle size of ≤ 5 nm.
- 25. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores have has a mean diameter of ≤ 3 nm.
- 26. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores have has a mean diameter of ≤ 2 nm.
- 27. (Amended) The porous dielectric matrix material of claim 24 wherein the plurality of pores have has a mean diameter in the range of 0.75 to 3 nm.
- 30. (Amended) The electronic device of claim 25 wherein the plurality of pores have has a mean diameter in the range of 0.75 to 3 nm.